



SERVICE MANUAL



TITAN FIRST STAGE

Rev. 05/2008

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Revision	Revision description
Rev. 05/08	Warning for the replacement for the brass Titan Din screw by a stainless steel Din screw and modification of its torque value.

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INTRODUCTION

This manual gives the instructions and the recommendations for the disassembly, the cleaning, the checking, the reassembly and the adjustment of an Aqualung regulator.

This manual is not an instruction manual for unqualified personnel. The procedures described in this manual are intended only for qualified personnel who have been trained in the servicing of Aqualung equipment during a specialised course.

If you do not understand certain procedures in this manual you should contact an Aqualung service consultant before undertaking any operation.

WARNINGS, ATTENTION, NOTES

Certain icons have been used to facilitate the reading and understanding of this manual. They have the following meanings :



WARNING: Indicates situations that could result in serious or fatal accidents if the advice given is not followed correctly.



ATTENTION: Indicates a situation or action that could cause serious damage to the product, making it dangerous if the advice given is not followed correctly.



NOTE : Notes are used to emphasize important points as well as information which needs to be remembered.

MAINTENANCE



Attention: Whatever the number of dives carried out during a year, the regulator should receive a complete service each year. If the regulator is used in a chlorinated or aggressive environment the service period should be reduced to six months.

In order to conform with the Aqualung Regulator Lifetime Guarantee, all servicing (inspection, servicing and repairs) should be recorded in the Service Record incorporated in the regulator User Manual.

GENERAL INSTRUCTIONS

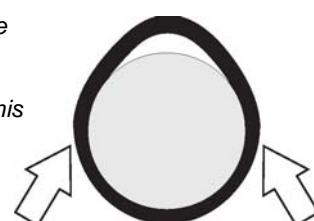
1. In order to carry out the procedures described in this manual correctly it is important that you follow the steps in the exact order indicated. Read the manual through completely so that you become familiar with all the procedures, the special tools and the replacement parts, before starting to disassemble the product. Keep this manual open near to you so that you can refer to it step by step. Do not rely on your memory..
2. All servicing and repair procedures should be carried out in a workshop that is clean, well lit, easy to access and specially fitted for the purpose.
3. The regulator body should never be directly held in the jaws of a vice. To hold the body, screw the tool 006230 into the HP port and then grip the tool with the vice.
4. Once the regulator has been disassembled, the re-usable components should be separated from the components that need to be replaced. Fragile items with seats or crowns with critical sealing surfaces should be separated and protected during servicing in order to prevent any damage.
5. Use only spare parts from Aqualung service kits. Never replace an Aqualung part with one from another manufacturer, even if it appears similar.
6. Never re-use regulator parts which should be replaced on the pretext that the regulator has seen little use since its manufacture or since its last service.
7. When reassembling, check that the torque used conforms with that shown in Table 4, Torque. Some parts can be irretrievably damaged if the acceptable torque is exceeded.

GENERAL CONVENTIONS

The conventions described below define the actions to be carried out when an instruction is given.

1. **Unscrew:** to unscrew a threaded part, turn it anti-clockwise.
2. **Screw:** to screw a threaded part, turn it clockwise.
3. **Remove the O-ring:** To remove an O-ring follow the method below, using the special tool provided for this purpose. Any tool that could damage the O-ring should be avoided. In every case, replace the O-ring removed with a new one.

Press simultaneously on the two sides of the O-ring in order to form an 'eye'. Insert the special tool into this eye to remove the O-ring.



4. The acronyms used:
LP: Low Pressure
MP: Medium Pressure
HP: High Pressure
5. Numbers in brackets indicate the part number of the component shown on the exploded view attached.

DISASSEMBLY PROCEDURE



Note: Before commencing disassembly, consult the exploded view to check the reference numbers of all parts requiring replacement. These parts should all be replaced by new parts and should not be re-used on the pretext that the regulator has seen little use since its manufacture or since its last service.



Attention: Use only the special tool when removing O-rings in order to avoid damaging the seal recess. The slightest scratch on a sealing surface could cause a leak. If a surface should be damaged then this part should be replaced with a new one. Do not use any pointed instrument or metal tool to remove O-rings.

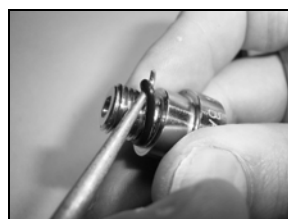
1. Remove the hoses from the first stage using an appropriate spanner. Screw the holding tool (116320) into one of the MP ports and clamp the holding tool in a vice.



2. Disassembly of yoke version.
 Remove the clamp screw (28) and the dust cap (29). Unscrew the yoke seat (27). Remove the seat and the yoke (26).



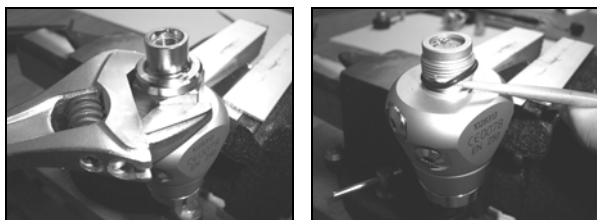
- 2.1 Disassembly of DIN et Nitrox version.
 Using a 6mm Allen key unscrew the seat screw (30). Remove the handwheel (29).
 DIN version : Remove the O-ring (31) and the O-ring (20)
 Nitrox version: Remove the O-ring (32) and the O-ring (30)



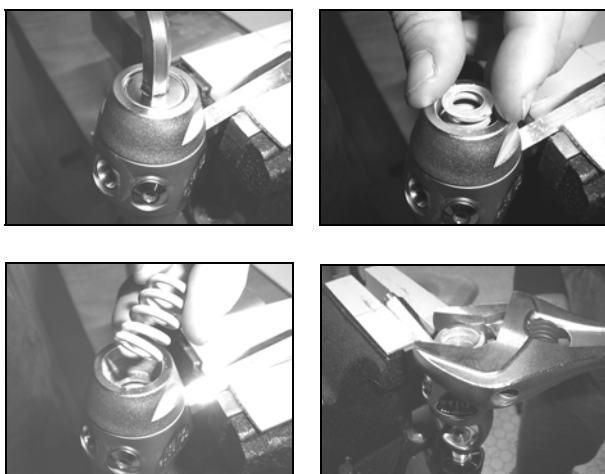
For the Din screw (Air version) , check the marking of this screw :
 If the marking is "300 BAR MAX" , it means that part is made of brass , you have to replace this part by a new part made of stainless steel which is marked "300 BAR MAXI".
 Contact Aqualung or its distributor to get the stainless steel screws.



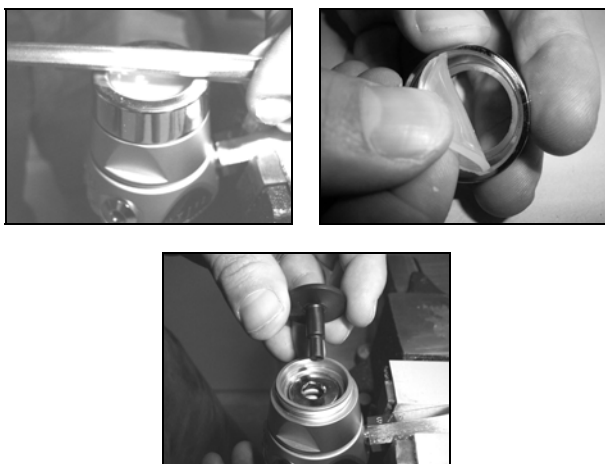
Use a 26mm flat spanner to unscrew the DIN seat (28) then remove the O-ring (27).



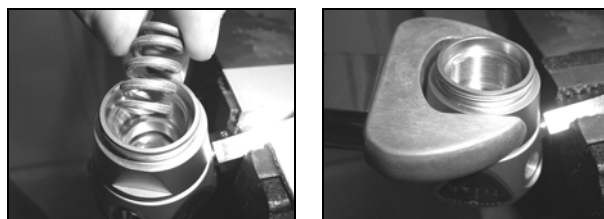
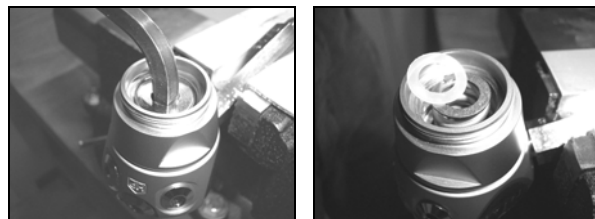
3. Disassembly of the wet chamber.
Turn the body over and unscrew the adjusting screw (25).
Remove the washer (24) and then the spring (23).
Use a 30mm flat spanner to unscrew the body screw (22).



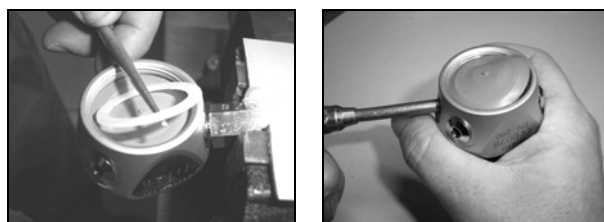
- 3.1 Disassembly of the wet chamber. (see view 103191)
Turn the body over and using the screwdriver (111399) Unscrew the diaphragm screw (34). Remove the diaphragm (33). Remove the piston (31) with its sticker (32).



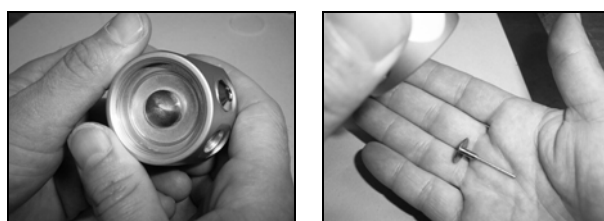
Use a de 8 mm Allen key to unscrew the adjusting screw (25). Remove the washer (24) and then the spring (23).
Use a 34mm flat spanner to unscrew the body screw (22).



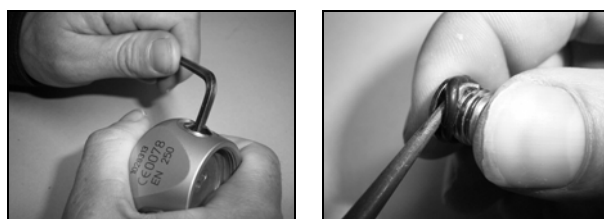
4. Manually remove the spring pad (17).
Remove the washer (16).
Fit a hose into an MP port to help eject the diaphragm. (15).



5. Remove the body from the vice, turn it over, and allow the spring (14) and the needle (13) to fall into your hand.



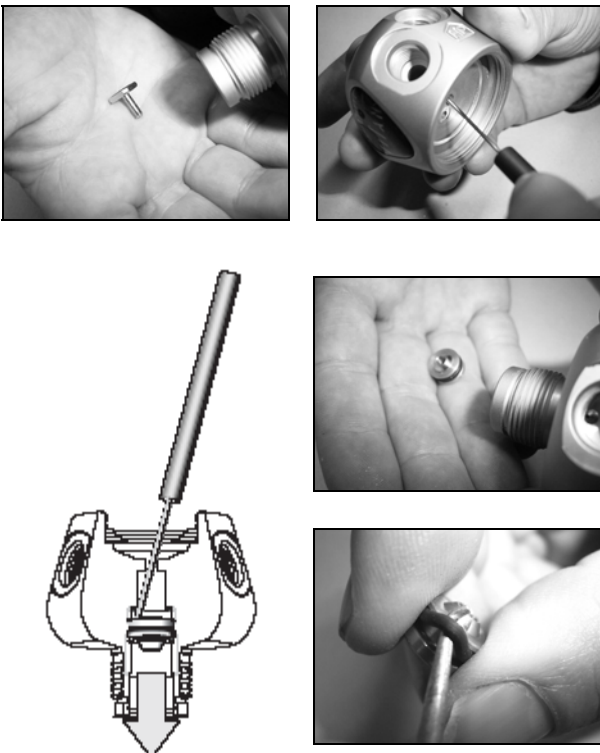
6. Unscrew the MP (19) and HP (21) plugs. Use the special tool (944022) to remove the O-rings (18) et (20).



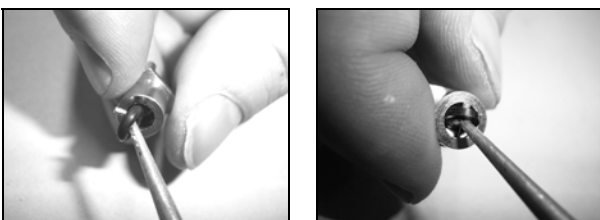
7. Using the circlips pliers, remove the circlip (12) while holding them with your finger. Remove the filter washer (11), the filter (10), the spring (9), the spring block (8) and the spring (5).



8. Turn the body over and let the HP seat (4) drop into your palm. Insert the seat extraction tool (116236) into the central hole in the body, MP side (diaphragm side). Make sure that the tool is in contact with the seat. Holding the tool at a slight angle, press it toward the inside to remove the seat (2). Remove the seat O-ring (3).



9. Remove the O-ring (6) and then the anti-extrusion washer (7), taking care not to damage the spring block seal groove (8).



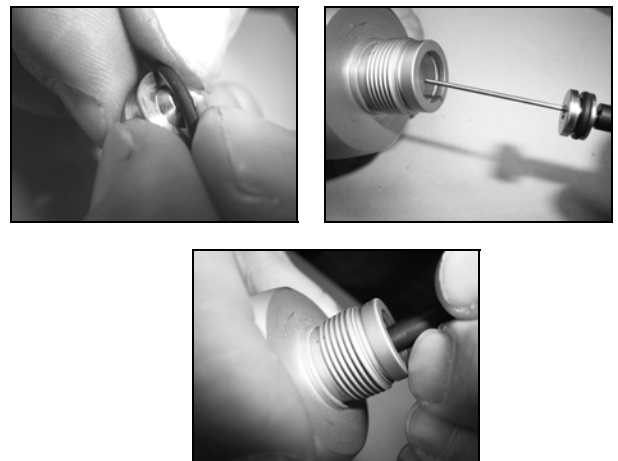
END OF DISASSEMBLY



Before starting to re-assemble the regulator, make sure that all replacement parts have been cleaned and lubricated in accordance with **Procedure A : Cleaning and Lubricating** on page 14.

RE-ASSEMBLY PROCEDURE

1. Fit a new lubricated O-ring (3) on the seat (2). Slide the seat onto the tool (116236), engage the assembly into the body (HP side) and insert the seat into its housing by pushing on the tool.



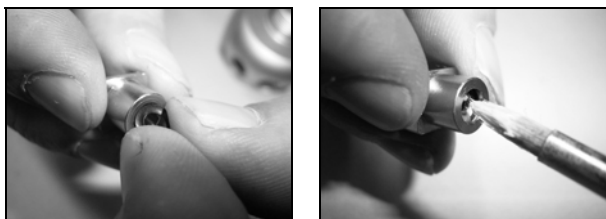
1. Insert the HP seat (4) (face toward the interior of the body) and fit the spring (5).



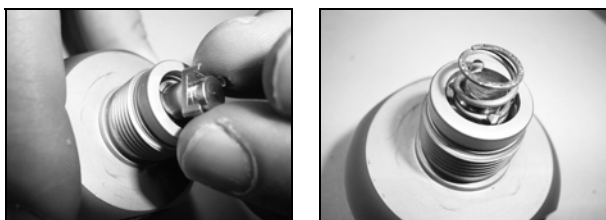
Note : Before continuing, closely examine the anti-extrusion washer (21). You will note that it has a flat side and a concave side. For correct assembly the concave side should be against the O-ring, as shown in the picture below.



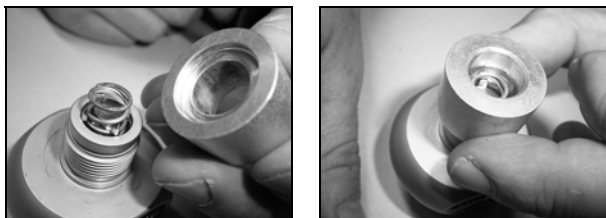
2. Fit a new lubricated anti-extrusion washer (7) puis a new lubricated O-ring (6) in the spring block (8). Use a small brush to add a little grease to the inside of the spring block.



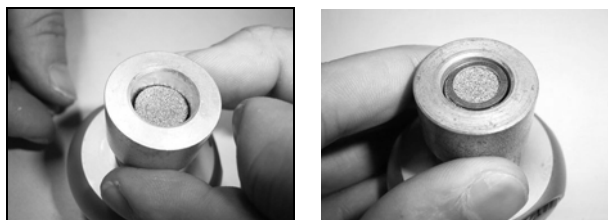
4. Fit the spring block (8) inside the spring (5).
Fit the spring (9) into its position in the spring block.



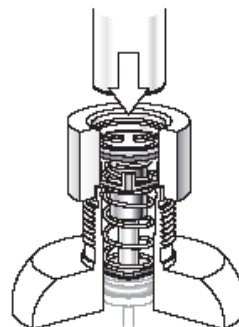
5. Fit the tool (A11000) onto the body.



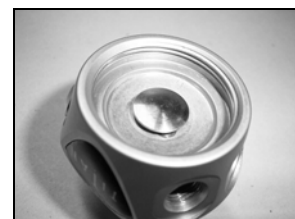
6. Insert a new O-ring (10) (smooth side toward the circlip) then the filter washer (11) (dome facing outward).



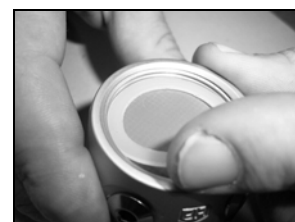
7. Fit the circlip (12) (ribbed part facing into the body). Using a $\varnothing 12$ button, push the circlip in until it locates in its groove.



8. Turn the regulator over so that the MP side is toward you. Insert the pin (13) into the central hole. Place the pad (14) over the needle. Press several times on the pad. It should feel like a push-button.



9. Fit a new diaphragm (15) into the body. Position it well in place by pushing with your finger around its edge. Fit the washer (16) on to the diaphragm and make sure that it is correctly positioned on the diaphragm.



10. Place the spring pad (17), flat side down, in the centre of the diaphragm.



11. Screw the holding tool (116230) into a HP port and then clamp the tool in a vice, so that the diaphragm faces upwards. Manually screw the body screw (22) fully home into the body.

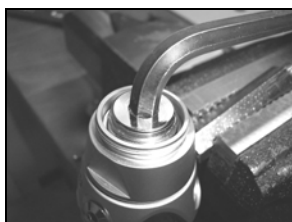


Use a 30 mm (wet chamber) or a 34mm (dry chamber) torque wrench at 2.5 m.kg.

12. Engage the spring (23) in the centre of the spring pad. Place the washer (24) on the spring.



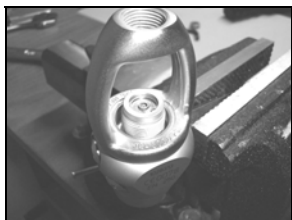
13. Fit the adjusting screw (25) into the screw (22).



If the regulator is an yoke version, go to step 14. If it is a DIN version, go to step 15.

14. Fitting the yoke

- a. Fit the yoke (26) then engage several threads of the yoke seat (27). Using a torque wrench tighten the seat at 2.5 m.kg.



- b. Fit the dust cap (29) onto the yoke screw threaded section and (28) and screw the yoke screw into the yoke.



15. Fitting the DIN connection (see exploded view 103151)
Or Nitrox connection (see exploded view NC-20024)

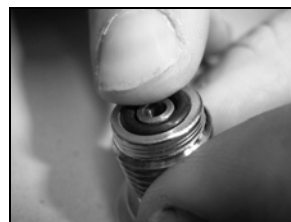
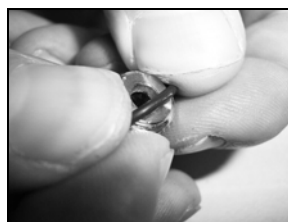
- a. Fit a new O-ring (27) onto the body screw.



- b. Screw the seat (28) onto the body and tighten it at 2.5 m.kg.

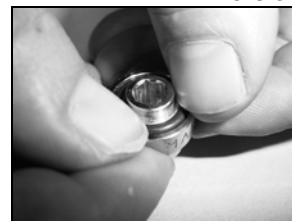


- c. DIN Version:
Fit a new lubricated O-ring (20) and a new lubricated O-ring (31) on the seat screw (30).
Nitrox Version:
Fit a new lubricated O-ring (30) and a new lubricated O-ring (32) on the seat screw (31).



Version DIN

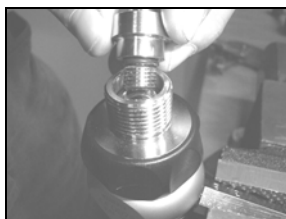
Version Nitrox



16. Fit the handwheel (29) and manually engage the seat screw. Using a torque wrench tighten the seat screw at 2.5 m.kg :



Make sure that you have fitted a stainless steel din screw , marked : 300 BAR MAXI



17. Fit new lubricated O-rings to the HP and MP plugs then fit them to the regulator, leaving one MP port free.

ADJUSTING THE FIRST STAGE

- Screw an MP gauge (0-25 bar) into one of the MP ports. If the gauge is not fitted with an over-pressure valve, then it is vital that the second stage is fitted so that it can act as an over-pressure valve in the event of an HP leak.
- Connect the first stage to a cylinder charged to 200bar. Slowly open the cylinder valve to put the regulator under pressure.



Attention: if the MP indicated rapidly exceeds 9.5bar then this indicates a HP leak. Close the cylinder valve immediately and purge the regulator. Refer to **Table 1. Troubleshooting Guide.**

Turn the screw by increments of 1/8 of a turn and purge the regulator several times, using the second stage, after each increment. Adjust the MP (see Table 5).

Once the MP has been adjusted, purge the second stage about ten times. When this is finished check the pressure gauge. The MP should be stable at the desired value (8.5b or 9.5b depending on the regulator). Make any further adjustments that may be necessary. Leave the regulator under pressure for several minutes and check that the MP remains stable. If the MP rises more than 0.3 bar this indicates that there is a leak. Refer to **Table 1. Troubleshooting Guide.**

- Close the cylinder valve and completely purge the regulator. Put the regulator under pressure once more and check that the MP is stable.

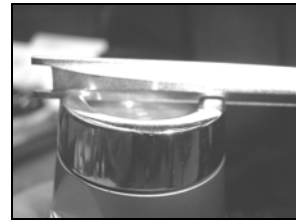
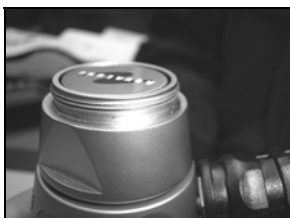
If the MP is different, repeat steps 3 and 4 until a stable pressure is obtained.

FINAL ASSEMBLY (See Exploded View 103191)



Note: The following step should be carried out with the regulator under pressure.

- With the regulator under pressure, insert the piston (31) into the dry chamber. Fit the diaphragm (33) fully into the diaphragm screw (34). Using the screwdriver (111399) tighten the screw fully home..



- Check that the MP is still stable (see Table 5)
- Close the cylinder valve and purge the regulator. Remove the MP pressure gauge and replace the MP plug.

END OF REASSEMBLY

TEST IN WATER

Check that all the MP and HP plugs are in place and that a correctly adjusted second stage is connected to the first stage. Slowly open the cylinder valve to put the regulator under pressure.

Immerse the first stage completely in water to check that there are no leaks.



Note : Do not mistake any bubbles which are trapped in the regulator with a leak. If there is a leak there will be a constant stream of bubbles.





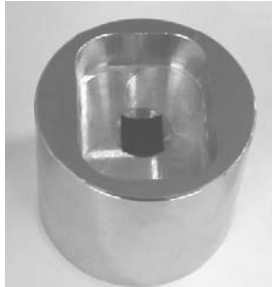
When you are sure that there is no leak, close the cylinder valve and purge the regulator. Remove the first stage from the cylinder and refit the dust cap.

If a leak has been detected then note its source and refer to **Table 1. Troubleshooting Guide.**

Tableau 1. Troubleshooting Guide

SYMPTOM	POSSIBLE CAUSE	TREATMENT
Increase in MP (likely to cause a second stage leak)	1. The HP seat (4) is worn or damaged.	1. Replace the HP seat
	2. The crown (2) is damaged.	2. Replace the crown
	3. The O-ring (6) is worn or damaged.	3. Replace the O-ring
	4. Seal groove on spring block (8) damaged	4. Replace the spring block
	5. The O-ring (3) is worn or damaged.	5. Replace the O-ring
	6. Seat seal groove (2) on the body is damaged.	6. Replace the body
External leak	1. The MP and HP plug O-rings are extruded, worn or damaged.	1. Replace the O-ring(s)
	2. The diaphragm (33) is worn or damaged	2. Replace the diaphragm
	3. The diaphragm (15) is worn or damaged	3. Replace the diaphragm
	4. The sealing face of the diaphragm is damaged.	4. Replace the body
	5. Body screw is loose (22)	5. Tighten the dry chamber
	6. Seat O-ring (27) damaged	6. Replace the O-ring
Reduced airflow or significant breathing resistance on complete regulator.	1. Cylinder valve not completely open	1. Open the valve, check the cylinder pressure
	2. Cylinder valve requires servicing	2. Try another cylinder
	3. Filter (10) blocked	3. Replace the filter
	4. The cylinder is empty	4. Charge the cylinder



Table 2. List of Tools and Service Kits

REF	DESCRIPTION	APPLICATION	US PART NO.
116222	MP pressure gauge complete 0/16B	Checking medium pressure	111610
111399	Screwdriver	Loosen/tighten diaphragm screw	081247
A11000	Titan Conshelf tool  OUTIL HP TITAN / CONSHELF A11000	Inserting circlips (12)	111000
N/C	O-ring tool	Fit and remove O-rings	944022
N/C	Reversible circlip pliers	Fitting and removing circlips	111100
116236	Seat fitting tool  OUTIL DE MONTAGE 116236	Seat assembly/disassembly	109436
116230	Holding tool  AXE DEMONTAGE HP 116230	For holding 1st stage in vice	100395
A11001	Socket wrench 	Socket wrench tightening seat (29)	111001
122152	Socket wrench 	Socket wrench tightening body screw	n/a
N/C	Torque wrench 2.5 m.kg	Seat, dry chamber	n/a
N/C	Torque wrench 0.5 m.kg	Plugs	n/a

N/C	Extender	Extender for socket wrench	n/a
N/C	Adjustable spanner	Dry chamber	n/a
N/C	Allen key 4mm	MP and HP plugs	n/a
N/C	Allen key 8mm	MP adjustment, unscrew plug (20)	n/a
N/C	Hexagonal tool 8mm	Plug (20) (fits to torque wrench)	n/a
N/C	Allen key 6mm	Disassembly of DIN seat	n/a
N/C	Hexagonal wrench 6mm	Tightening DIN seat (fits to torque wrench)	n/a

128002	Service Kit HP Titan Yoke / DIN / D	All versions except Nitrox	900001
213660	Service Kit Titan Nitrox / O2	Nitrox Version	

Table 3. Recommended cleaners and lubricants

LUBRICANT / CLEANER	APPLICATION	SOURCE
Cristo-Lube MCG 111	All O-rings	Aqualung, ref. 480025
<div>  <p>Attention: Silicone parts do not require lubrication. Do not grease them. Greasing silicone parts can change their molecular construction and cause premature degradation of the material.</p> </div>		
Oakite #31	Acid bath for cleaning brass and stainless steel parts.	Oakite Products, Inc.
NETALU	Acid bath for cleaning brass and stainless steel parts.	Aqualung, ref. 455001
Diluted white vinegar	Acid bath for cleaning brass and stainless steel parts.	Household stores
<div>  <p>Attention: Do not use hydrochloric acid for cleaning parts. Hydrochloric acid, even when well diluted, attacks the coating of metal parts and leaves a corrosive deposit that damages plastic parts and O-rings.</p> </div>		
Washing-up liquid (diluted with hot water)	Degreases brass and stainless steel parts; general cleaning of plastic and rubber parts.	Household stores

Procedure A Cleaning and Lubricating (All Aqualung Regulators)

Cleaning brass and stainless steel parts.

1. Pre-clean by soaking in NETALU diluted to 25%.
2. Cleaning in an ultra-sonic bath filled with a mixture of washing-up liquid + hot water. If some resistant deposits remain then fill the ultrasonic bath with white vinegar and repeat. DO NOT put plastic, rubber, silicone or anodised aluminium parts in contact with vinegar.
3. Rinse in demineralised or fresh water to avoid calcium deposits. Soak for 10 minutes. Dry with filtered low pressure air and then check that their condition is now suitable for re-use.

Cleaning plastic, rubber and anodised aluminium parts.

For anodised aluminium parts : soak in a « NETALU diluted to 25% ». Rinse in fresh water and dry with low-pressure filtered air.
For plastic parts. (casings, plugs.): clean in an ultrasonic bath containing a mixture of washing-up liquid and hot water. Use only a toothbrush with nylon bristles to remove any deposits. Rinse in fresh water and dry with low-pressure filtered air



Attention : Do not place plastic and rubber parts in contact with acid solutions. This could alter their physical properties and cause degradation and premature breakdown.

Cleaning parts for Nitrox/O2 use.

1. Metal parts : Pre-clean by soaking in NETALU diluted to 25%.
2. Ultrasonic cleaning in Promoclean TP108 diluted at 5% .
3. Rinse in demineralised water. Soak for 10 min.
4. Dry in the open air in a clean and dust-free atmosphere. Place the parts on a white cloth, allow to dry and check after drying that the cloth shows no grease deposits and that the condition of the parts is appropriate for re-use with Nitrox/O2.

Cleaning hoses.

If there is significant corrosion then it is permissible to soak only the ends in an ultrasonic bath, avoiding any possibility of the solution entering the hose. Rinse in fresh water and allow to dry with the connections hanging down. Dry the inside with filtered compressed air before reconnecting the hose to the regulator.

Wiping.

To wipe parts, use a white filter paper, a pure cotton cloth or any other material that **does not produce fluff**.

Inspection.

Visually check under a white light (day light or artificial light).
The parts are completely free of any traces of :

1. organic materials (oil, grease, paint, rust...)
2. cleaning agents
3. dust
4. humidity

Lubrication.

When handling O-rings wear unpowdered latex gloves. It is important not to allow contact between the internal components and the skin or any other source of contamination when the regulator is being prepared for Nitrox use. All seals should be lubricated with Cristolube MCG111. Cover the seals with a light film of grease and remove any excess by rolling the seal between finger and thumb. Do not use an excess of grease, this can have the effect of accumulating particles which could damage the O-rings.

Tableau 4. Torque values

REFERENCE N°	DESCRIPTION	FORCE
122803, 124604	Body screw	2.5 m.kg.
124602	Seat (27)	2.5 m.kg.
124605	DIN seat (28)	2.5 m.kg.
124634	Nitrox seat (28)	2.5 m.kg
124631	Nitrox seat screw (31)	2.5 m.kg
124606	DIN seat screw (30)	2.5 m.kg

Tableau 5. Checking specifications

TEST	CONSIGNES	SPECIFICATIONS
Leak Test	160 bar < Working pressure < 200 bar	No leak
Medium Pressure	160 bar < Working pressure < 200 bar	TITAN standard Versions: MP at 9.5 bar \pm 0.5 bar TITAN supreme Versions: MP at 8.5 bar \pm 0.5 bar
MP Variation	160 bar < Working pressure < 200 bar	After purging the regulator several times, the MP should not increase by more than 0.3 bar in 5-15 seconds.

Maintenance Notes.

[illegible]

Exploded View of Titan First Stage.

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N°	No. PIÈCE	QTE	DESIGNATION	DESCRIPTION
1	124626	1	Corps Titan 2 Marqué	Body
2	122224	1	Siège	Crown
3	124704	1	JT 1.9x7.2 EPDM 80ShA	OR 1.9x7.2 EPDM 80ShA
4	124624	1	Clapet HP	HP seal
5	122244	1	Ressort	Spring
6	124612	1	JT 1.78x2.9 EPDM 90ShA	OR 1.78x2.9 EPDM 90ShA
7	119129	1	Bague anti extrusion	Anti extrusion washer
8	A05324	1	Barillet	Spring Block
9	122243	1	Ressort Barillet	Spring
10	A05106	1	Fillre	Filler
11	124628	1	Rondelle filtre	Filter washer
12	H63051	1	Circulips	Circulips
13	A02002	1	Aiguille	Pin
14	101569	1	Poussoir Titan 2	Pin support
15	119159	1	Diaphragme	Diaphragm
16	119143	1	Rondelle	Washer
17	124560	1	Embase ressort	Spring pad
18	124703	4	Bague	O-ring
19	122233	4	Bouchon MP 3/8"	3/8" IP plug
20	124701	1	JT 1.78x8.74 EPDM 80ShA	OR 1.78x8.74 EPDM 80ShA
21	122237	1	bouchon HP 7/16"	7/16" HP plug
22	124604	1	Ecrou d'étanchéité	Body screw
23	119156	1	Ressort	Spring
24	H45097	1	Rondelle	Washer
25	122805	1	Vis de réglage	Adjusting screw
26	124610	1	Etrier chrome satin	satin yoke
27	124602	1	Siège d'étrier	Yoke nut
28	124148	1	Vis d'efrier	Yoke screw
29	124555	1	Bouchon d'etrier	Dust cap
30	124603	1	Sticker	Sticker

Les composants notés en italique gras sont inclus dans le kit d'entretien

N°	Date	Modif	Ind	Designation	HP TITAN ETIER	TITAN 1st STAGE	Notice	Date	28.10.03
1372	01.05	A							

Visaz: SC
Vale:
100 Avenue, 100 rue - BP 148
92500 Neuilly-sur-Seine - FRANCE
Tél: (33) 01 47 00 28 28
Fax: (33) 01 47 00 28 99
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Exploded View of Titan DIN First Stage.

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No.	PIECE	QTE	Désignation	DESCRIPTION
1	124626	1	Corps Titan 2	Body
2	122224	1	Siège	Crown
3	124704	1	JT 1.7x7.2 EPDM 80ShA	OR 1.7x7.2 EPDM 80ShA
4	124624	1	Clapet HP	HP seal
5	122244	1	Ressort	Spring
6	124612	1	JT 1.78x2.9 EPDM 90ShA	OR 1.78x2.9 EPDM 90ShA
7	119129	1	Bague anti extrusion	Anti extrusion washer
8	A05324	1	Barillet	Spring Block
9	122243	1	Ressort Barillet	Spring
10	A05106	1	Filtre	Filter
11	124628	1	Rondelle filtre	Filter washer
12	H63051	1	Circulips	Circulips
13	A02002	1	Aliguille	Pin
14	101569	1	Poussoir Titan 2	Pin support
15	119159	1	Diaphragme	Diaphragm
16	119143	1	Rondelle	Washer
17	124560	1	Embase ressort	Spring pad
18	124703	4	Bague	O-ring
19	122233	4	Bouchon MP 3/8"	3/8" IP plug
20	124701	2	JT 1.78x8.74 EPDM 80ShA	OR 1.78x8.74 EPDM 80ShA
21	122237	1	bouchon HP 7/16"	7/16" HP plug
22	124604	1	Ecras d'étanchéité	Body screw
23	119156	1	Ressort	Spring
24	H45097	1	Rondelle	Washer
25	122805	1	Vis de réglage	Adjusting screw
26	124603	1	Sticker	Sticker
27	124609	1	JT 1.78x17.17 EPDM 90ShA	OR 1.78x17.17 EPDM 90ShA
28	124605	1	Siège Din	Din fitting
29	124607	1	Volant Din Titan	Din handwheel
30	124606	1	Vis de siège Din	Din screw
31	124709	1	Bague	O-ring
32	124665	1	Bouchon Din	Din plug

Les composants notés en italique gras sont inclus dans le kit d'entretien

Désignation	HP TITAN DIN
Description	TITAN DIN 1st STAGE
Notice	-----
Date	28.10.03

Votre SC

Votre

103151 A

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Exploded View of Titan D First Stage.

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N°	No. Pièce	Qté	Designation	Description
1	124626	1	Corps Titan 2 Marqué	Body
2	122224	1	Siège	Crown
3	124704	1	1.9x7.2 EPDM 80ShA	OR 1.9x7.2 EPDM 80ShA
4	124624	1	Clapet HP	HP seal
5	122244	1	Ressort	Spring
6	124612	1	1.78x2.9 EPDM 90ShA	OR 1.78x2.9 EPDM 90ShA
7	119129	1	Bague anif exfuxion	Anif exfuxion washer
8	A05324	1	Barillet	Spring Block
9	122243	1	Ressort Barillet	Spring
10	A05106	1	Fillre	Filler
11	H63051	1	Circlips	Circlips
12	A02002	1	Alguille	Pin
13	101569	1	Poussoir Titan 2	Pin support
14	119159	1	Diaphragme	Diaphragm
15	119143	1	Rondelle	Washer
16	124560	1	Embase ressort	Spring pad
17	124703	4	Bague	O-ring
18	122233	4	Bouchon MP 3/8"	3/8" IP plug
19	124701	1	1.78x8.74 EPDM 80ShA	OR 1.78x8.74 EPDM 80ShA
20	122237	1	bouchon HP 7/16"	7/16" HP plug
21	122803	1	Eccrou d'etanchéité	Body screw
22	119156	1	Ressort	Spring
23	H45097	1	Rondelle	Washer
24	122805	1	Vis de réglage	Adjusting screw
25	124610	1	Etrier chrome satin	satin yoke
26	124602	1	Siège d'étrier	Yoke nut
27	124148	1	Vis d'étrier	Yoke screw
28	124555	1	Bouchon d'étrier	Dust cap
29	124603	1	Sticker	Sticker
30	122801	1	Piston	Piston
31	124545	1	Sticker	Sticker
32	122804	1	Membrane	Diaphragm
33	122802	1	Eccrou membrane	Diaphragm retainer
34	124628	1	Rondelle filtre	Filter washer

Les composants notés en italique gras sont inclus dans le kit d'entretien

Vis: 5C Vert
New Arrow, Hélice n° 87 148
0031 CARLOS CDDO FRANCE
Rue de la République
F-93100 St Denis
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103191 A

Designation: HP TITAN D ETIER
Description: TITAN D 1st STAGE
Notice: -----
Date: 28.10.03
N°: 1372
Date Modif: 01/05
Ind: A

Exploded View of Titan D DIN First Stage.

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N°	No. PIÈCE	QTE	DESIGNATION	DESCRIPTION
1	124626	1	Corps Titan 2	Body
2	122224	1	Siège	Crown
3	124704	1	JT 1.9x7.2 EPDM 80ShA	OR 1.9x7.2 EPDM 80ShA
4	124624	1	Clapet HP	HP seal
5	122244	1	Ressort	Spring
6	124612	1	JT 1.78x2.9 EPDM 90ShA	OR 1.78x2.9 EPDM 90ShA
7	119129	1	Bague anti extrusion	Anti extrusion washer
8	A05324	1	Barillet	Spring Block
9	122243	1	Ressort Barillet	Spring
10	A05106	1	Filtre	Filter
11	124628	1	Rondelle filtre	Filter washer
12	H63051	1	Circlips	Circlips
13	A02002	1	Aiguille	Pin
14	101569	1	Poussoir Titan 2	Pin support
15	119159	1	Diaphragme	Diaphragm
16	119143	1	Rondelle	Washer
17	124560	1	Embase ressort	Spring pad
18	124703	4	Bague	O-ring
19	122233	4	Bouchon MP 3/8"	3/8" IP plug
20	124701	2	JT 1.78x8.74 EPDM 80ShA	OR 1.78x8.74 EPDM 80ShA
21	122237	1	bouchon HP 7/16"	7/16" HP plug
22	122803	1	Ecrou d'étanchéité	Body screw
23	119156	1	Ressort	Spring
24	H45097	1	Rondelle	Washer
25	122805	1	Vis de réglage	Adjusting screw
26	124603	1	Sticker	Sticker
27	124609	1	JT 1.78x17.17 EPDM 90ShA	OR 1.78x17.17 EPDM 90ShA
28	124605	1	Siège Din	Din fitting
29	124607	1	Volant Din Titan	Din handwheel
30	124606	1	Vis de siège Din	Din screw
31	124709	1	Bague	O-ring
32	124665	1	Bouchon Din	Din plug
33	122801	1	Piston	Piston
34	124545	1	Sticker	Sticker
35	122804	1	Membrane	Diaphragm
36	122802	1	Ecrou membrane	Diaphragm retainer

Les composants notés en italique gras sont inclus dans le kit d'entretien

Vitex SC Vert
Titec America, Inc. 14000 E. 14th Ave.
Denver, CO 80231-1000
Tel: (303) 441-9200 Ext. 800
Fax: (303) 441-9200 Ext. 800

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Désignation	HP TITAN D DIN
Description	TITAN D DIN 1st STAGE
Notice	-----
Date	29.10.03
N°	1372
Date Modif	01/05
Ind	A

Exploded View of Titan D Nitrox / O2 First Stage.

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N°	No. PIÈCE	QTE	DÉSIGNATION	DESCRIPTION
1	124626	1	Corps Titan 2 Marqué	Body
2	122224	1	Siège	Crown
3	124704	1	1.9x7.2 EPDM 80ShA	OR 1.9x7.2 EPDM 80ShA
4	124624	1	Clapet HP	HP seat
5	122244	1	Ressort	Spring
6	124612	1	1.78x2.9 EPDM 90ShA	OR 1.78x2.9 EPDM 90ShA
7	119129	1	1.78x2.9 EPDM 90ShA	OR 1.78x2.9 EPDM 90ShA
8	A05324	1	Bague anti extrusion	Anti extrusion washer
9	122243	1	Ressort Barillet	Spring Block
10	A05106	1	1.78x2.9 EPDM 90ShA	OR 1.78x2.9 EPDM 90ShA
11	124628	1	Rondelle filtre	Filter washer
12	H63051	1	Circulips	Circulips
13	A02002	1	Aiguille	Pin
14	101569	1	Poussoir Titan 2	Pin support
15	119159	1	Diaphragme	Diaphragm
16	119143	1	Rondelle	Washer
17	124560	1	Embase ressort	Spring pad
18	124703	4	Bague	O-ring
19	122233	4	Bouchon MP 3/8"	3/8" IP plug
20	124701	1	1.78x8.74 EPDM 80ShA	OR 1.78x8.74 EPDM 80ShA
21	122237	1	1.78x8.74 EPDM 80ShA	OR 1.78x8.74 EPDM 80ShA
22	122803	1	Bouchon HP 7/16"	7/16" HP plug
23	119156	1	Ecrou d'entraînement	Body screw
24	H45097	1	Ressort	Spring
25	122805	1	Washer	Washer
26	124603	1	Adjusting screw	Adjusting screw
27	124609	1	Sticker	Sticker
28	124634	1	1.78x17.17 EPDM 90ShA	OR 1.78x17.17 EPDM 90ShA
29	124633	1	Siège 9/16" Titan Nitrox	Nitrox seat
30	444243	1	Volant Titan Nitrox	Nitrox Handwheel
31	124631	1	1.78x6.07 EPDM 80ShA	OR 1.78x6.07 EPDM 80ShA
32	124632	1	Vis de siège	Nitrox screw
33	124635	1	Joint torique 2.62x13.94	O-ring 2.62x13.94
34	122801	1	Nitrox plug	Nitrox plug
35	124545	1	Piston	Piston
36	122804	1	Sticker	Sticker
37	122802	1	Membrane	Diaphragm

Les composants notés en italique gras sont inclus dans le kit d'entretien

HP TITAN D NITROX
TITAN D NITROX 1st STAGE

1372 N° 01/05 A Ind

Date 29.10.03

NC-20024 A

Vis. SC 1/8"

New America, Milano s.n.c. 87 148
00033 CARROCE CIDER FRANCE
Tel: 033 04 92 00 00 00
Fax: 033 04 92 00 00 00

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1ere Avenue – 14^e rue – BP 148
06513 CARROS cedex – France
☎ 00 33.(0)4 92 08 28 88
FAX 00 33.(0)4 92 08 28 99